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ABSTRACT

Results of the fifth year of testing by the Wisconsin Department of Public Instruction are presented. In 1980, objective-referenced tests in mathematics and reading were given to a sample of Wisconsin's public school students in grades 4, 8, and 12. Students were also given the Comprehensive Tests of Basic Skills (CTBS) in mathematics, reading, and language arts. An overview of results includes the following: (1) in mathematical computation, grade 4 students scored highest in addition and multiplication of whole numbers, whereas grade 8 and 12 students scored highest on whole number and decimal problems; (2) in each of the computation areas, grade 12 students scored 3-11 points higher than grade 8 students on the same test items; (3) in reading, grade 4 students averaged 72% correct in educational reading and 81% correct in everyday reading, grade students averaged 71% and 77%, and grade 12 students averaged 83% and 88%; (4) on identical reading test items, grade 12 students averaged 10 percentage points higher than grade 8 students; and (5) scores of grade 4, 8, and 12 students exceeded the national average on the CTBS. (RL)

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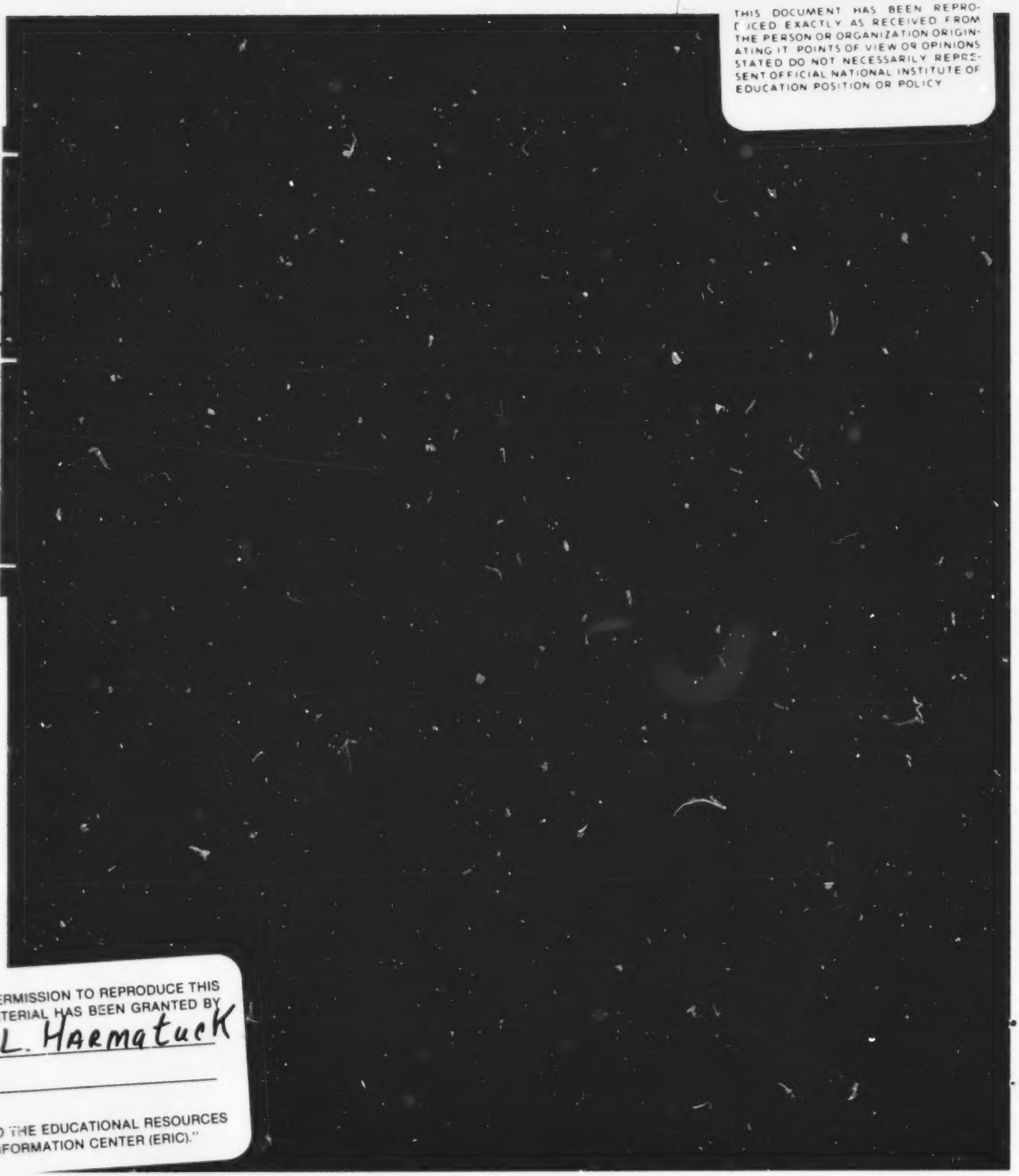

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# 1980 Wisconsin Pupil Assessment Program Report

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# 1980 WISCONSIN PUPIL ASSESSMENT PROGRAM REPORT

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# PREFACE

This report presents the results of the fifth year of testing by the Wisconsin Department of Public Instruction. In 1980, objective-referenced tests in mathematics and reading were given to a sample of Wisconsin's public school students. In addition, students were given norm-referenced tests in mathematics, reading, and language arts.

The results of testing by the Wisconsin Pupil Assessment Program provide:

- -a measure of student performance in selected academic areas;
- -a comparison of Wisconsin students to the national average in mathematics, reading, and language;
- -a description of changes in student scores over a period of years.

Use of a systematic statewide assessment procedure with specific goals is necessary to obtain valid and reliable information about the general status of educational achievement in Wisconsin public schools. Rather than testing all Wisconsin public school students, representative samples were drawn at selected grade levels. In 1980, students were tested at grades 4, 8, 11, and 12. This was accomplished without the excessive costs in both time and money that would result from testing all students at a selected grade level.

It is important to recognize that scores from any single test cannot be used to judge the total educational program. However, results do provide a basic profile of how well Wisconsin public school students perform a number of important skills.

The Wisconsin Pupil Assessment Program also provides materials and technical assistance to Wisconsin public and private schools which choose to utilize the statewide tests through local option testing. For example, in 1980, 24,000 students were tested under the local option.

Also, in March 1980, a pilot writing test was given to approximately 18,000 public school students. Results of the pilot writing effort will appear at a later date in a separate report.

Objective-referenced tests used by the Pupil Assessment Program undergo a systematic and rigorous developmental process. Committees consisting of teachers, parents, employers, and others assume a central role in identifying the objectives or skills to be measured at various grade levels. Most test questions measuring selected objectives have been written by Wisconsin educators.

Each of the mathematics and reading tests consists of two parts. The number of students sampled on each test is shown below.

Objective-Referenced Tests

| Fourth Grade | Eighth Grade | Twelfth Grade |
|---|---|---|
| Mathematics (N=1524) | Mathematics (N=1488) | Mathematics (N=1428) |
| Computation<br>Applications | Computation<br>Applications | Computation<br>Applications |
| Reading (N=3214) | Reading (N=2960) | Reading (N=2767) |
| Educational Reading<br>Everyday Reading | Educational Reading<br>Everyday Reading | Educational Reading<br>Everyday Reading |

NOTE: N=Number of students sampled

Annual information about student performance on Wisconsin designed objective-referenced tests is presented in this report. The results in mathematics over five years can be found on pages 6-8; and a comparison of reading scores over two years is shown beginning on page 14.

A norm-referenced test, the Comprehensive Tests of Basic Skills (CTBS), was given to over 9,000 students in 1980 to determine how Wisconsin students compare nationally in mathematics, reading, and language. These tests, produced by CTB/McGraw-Hill, are specifically designed to compare individuals or groups with a national average. For results see pages 42 through 49.

In testing, it is important to recognize that all scores derived through any sampling procedure represent "estimates" of the "true" scores. In practical terms, this means that if all Wisconsin public school students at a given grade level were tested, it is possible that the scores might differ slightly from those shown in any of the following tables. In general, the scores may vary from one to three points from the reported scores. On the objective-referenced tests the range is about one point; on the norm-referenced tests the range is from two to three points.

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## PART I: OVERVIEW OF RESULTS

1. In mathematical computation, fourth graders score highest in addition (88% correct) and multiplication (85% correct) of whole numbers. Scores in division and subtraction are slightly lower (about 82% correct). Fourth grade scores in money and measurement applications ("story problems") average about 73% correct.

2. In mathematical computation, eighth and twelfth grade students score highest on whole number and decimal problems. These scores range from 74% to 90% correct. Scores in fractions are lower (about 75% correct for twelfth graders and 69% for eighth graders).

3. In each of the computation areas, twelfth grade students score from 3 to 11 points higher than eighth graders on the same test items. The greatest difference in scores is in proportion and percent; eighth graders score 64% and twelfth graders 75% correct.

4. In money applications the scores are 74% and 86%; in measurement applications, 64% and 78%.

5. Over the past five years, students at grades 4, 8, and 12 have been given the objective-referenced mathematics test. During this period, scores have shown only slight variations from year to year.

6. In reading, fourth grade students average 72% correct in Educational Reading and 81% correct in Everyday Reading. Eighth graders average 71% and 77% correct in these domains; twelfth graders average 83% and 88% correct.

7. There are 34 items which appear on both the eighth and twelfth grade reading tests. On these identical items, twelfth grade students average about 10 percentage points higher than eighth graders.

8. Reading scores at the three grade levels tested show no significant change on the common items between 1979 and 1980.

9. As in previous years, scores of fourth, eighth, and twelfth grade students on the Comprehensive Tests of Basic Skills exceed the national averages.

   -Fourth graders rank at the 73rd percentile in reading, the 68th percentile in language, and the 71st percentile in mathematics.

   -Eighth graders rank at the 65th percentile in reading, the 66th percentile in language, and the 67th percentile in mathematics.

   -Twelfth graders rank at the 53rd percentile in reading, the 57th percentile in language, and the 56th percentile in mathematics.

## PART II: OBJECTIVE-REFERENCED MATHEMATICS TEST RESULTS

The objective-referenced tests in mathematics assess student skills in two domains: computation and applications. The computation section assesses the ability of students to add, subtract, multiply and divide. The applications area tests the ability of students to apply these operations to everyday situations.

The fourth graders are tested on whole number computations only. At grades eight and twelve, the computation and applications problems involve not only the use of whole numbers, but also the use of decimals and fractions.

The same math test questions are given to eighth and twelfth grade students. On all test objectives twelfth graders score higher than eighth graders. In part, these higher scores may reflect the greater number of mathematics courses taken by most twelfth grade students. However, the lower scores among eighth graders may demonstrate their lack of experience in such areas as reading charts and graphs, analyzing consumer situations, and measuring volume and perimeter.

MATHEMATICS: COMPUTATION AND ITS APPLICATIONS

Fourth Grade

Fourth grade students score highest in whole number addition (88% correct) and multiplication (85% correct). Their scores in subtraction (82% correct) and division (81% correct) are slightly lower.

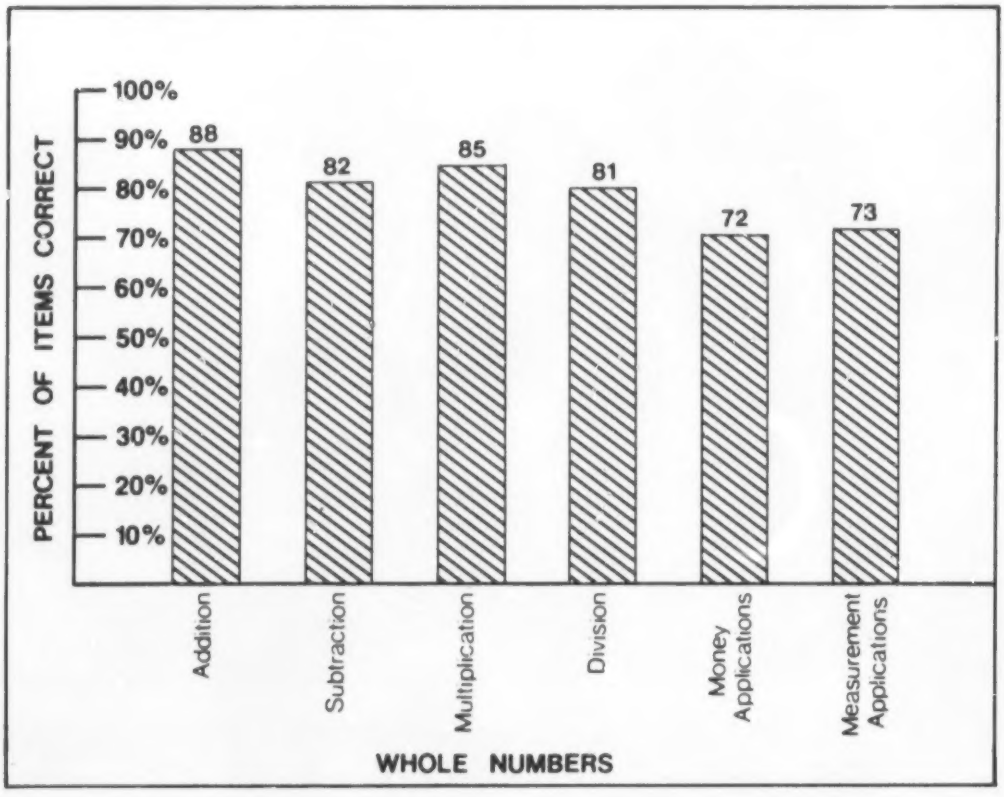
Scores in money applications and measurement applications average about 73% correct.

Most students correctly answer those items asking them to add and subtract whole numbers, both with and without regrouping. They are able to correctly complete problems in multiplication and division using basic facts.

In contrast, approximately one-half of fourth graders fail to correctly answer multi-step problems presented without a picture to find totals for time, units, weight, costs, earnings or change. If the multi-step problem includes a picture, students score higher.

Figure 1

Percent of Items Correct in Computation and Its Applications: Grade 4



MATHEMATICS: COMPUTATION AND ITS APPLICATIONS

Eighth Grade

Eighth grade students score highest on whole number computation. Scores in fractions and decimals are lower.

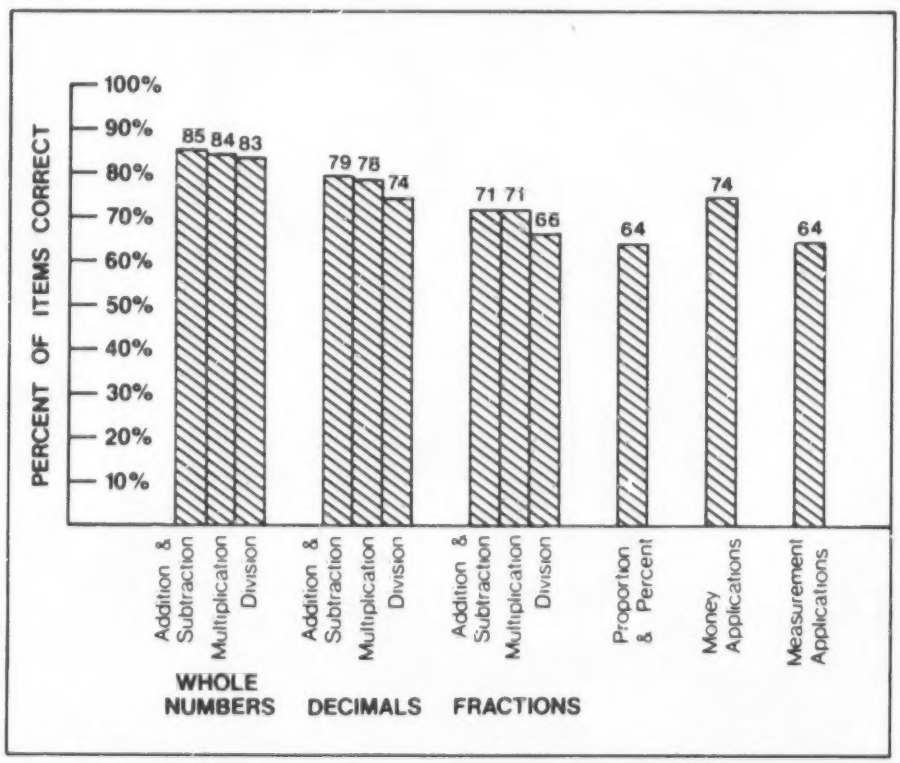
Eighth grade students average 84% in adding, subtracting, multiplying, and dividing whole numbers. Students average 77% correct in decimals and 69% correct in fractions. Scores in proportion and percent average 64% correct.

Scores in money and measurement applications problems are 64% and 74% correct, respectively.

The lowest scores for eighth graders occur on problems requiring calculation of a percent, and computation of length, area, weight, volume, rate, time, or temperature. Scores on these problems average 57% correct.

Figure 2

Percent of Items Correct in Computation and Its Applications: Grade 8



## MATHEMATICS: COMPUTATION AND ITS APPLICATIONS

### Twelfth Grade

Eighth and twelfth grade students answer identical test questions in mathematics. Both eighth and twelfth grade students score highest in whole numbers and decimals; scores are lower in fractions. On the average, twelfth graders score four points higher than eighth graders in whole number, decimal, and fraction problems.

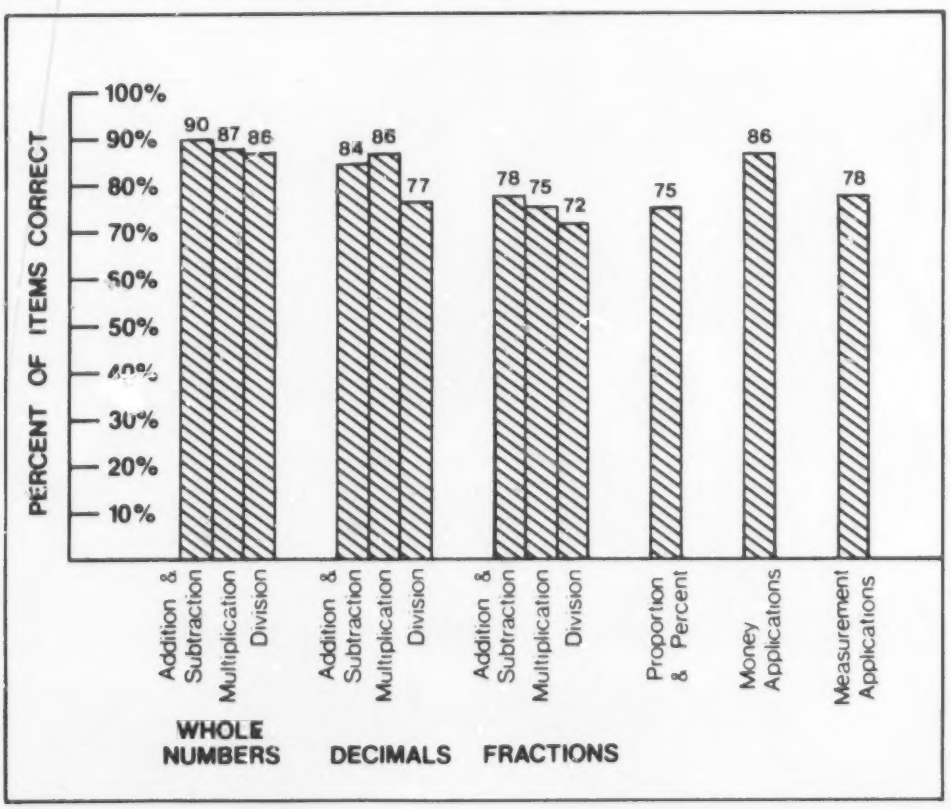
The greatest differences between the twelfth and eighth grade students are in proportion and percent problems (75% compared to 64% correct), money applications (86% compared to 74% correct), and measurement applications (78% correct compared to 64% correct).

The highest scores of twelfth graders occur in adding and subtracting whole numbers, reading graphs and maps, and solving problems dealing with earnings and savings. Students average 90% correct on these problems.

The lowest scores are in calculating percentages (68% correct) and solving problems dealing with rate, time, and temperature (66% correct). Scores on all other objectives fall between 72% and 87% correct.

Figure 3

Percent of Items Correct in Computation and Its Applications: Grade 12



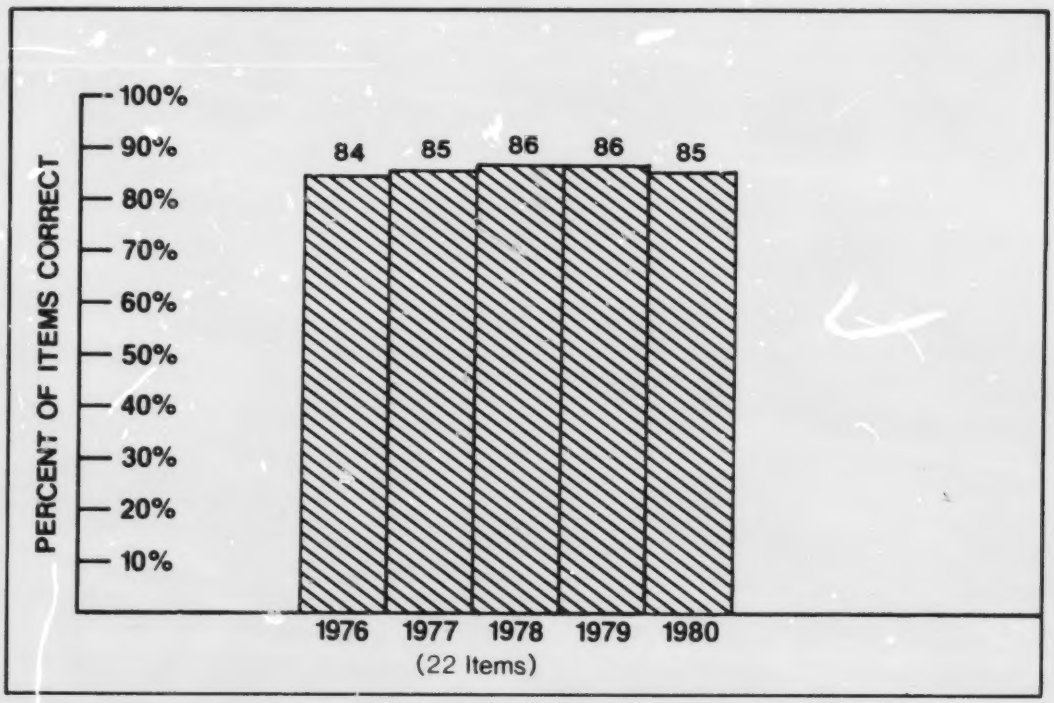
## PART III: COMPARISON OF 1976-1980 MATHEMATICS RESULTS

In order to compare test results over time, the 1976-1980 tests in mathematics contain a core of common items. Generally, the annual scores during this period are similar.

On the 1976-1980 fourth grade tests in mathematics, there are 22 common items. The scores range from 84% correct in 1976 to 86% correct in 1979.

Figure 4

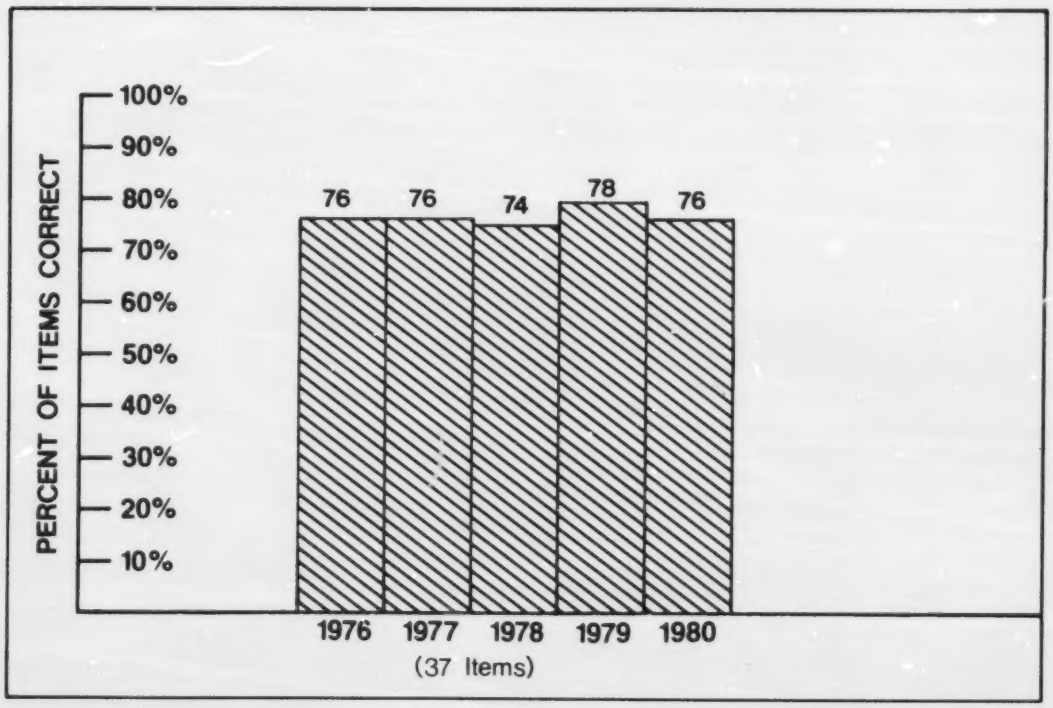
Percent of Items Correct in Mathematics in 1976-1980: Grade 4



From 1976 to 1980, there are 37 common items on the eighth grade tests in mathematics. The scores show little variation, and range from 74% correct (1978) to 78% correct (1979).

Figure 5

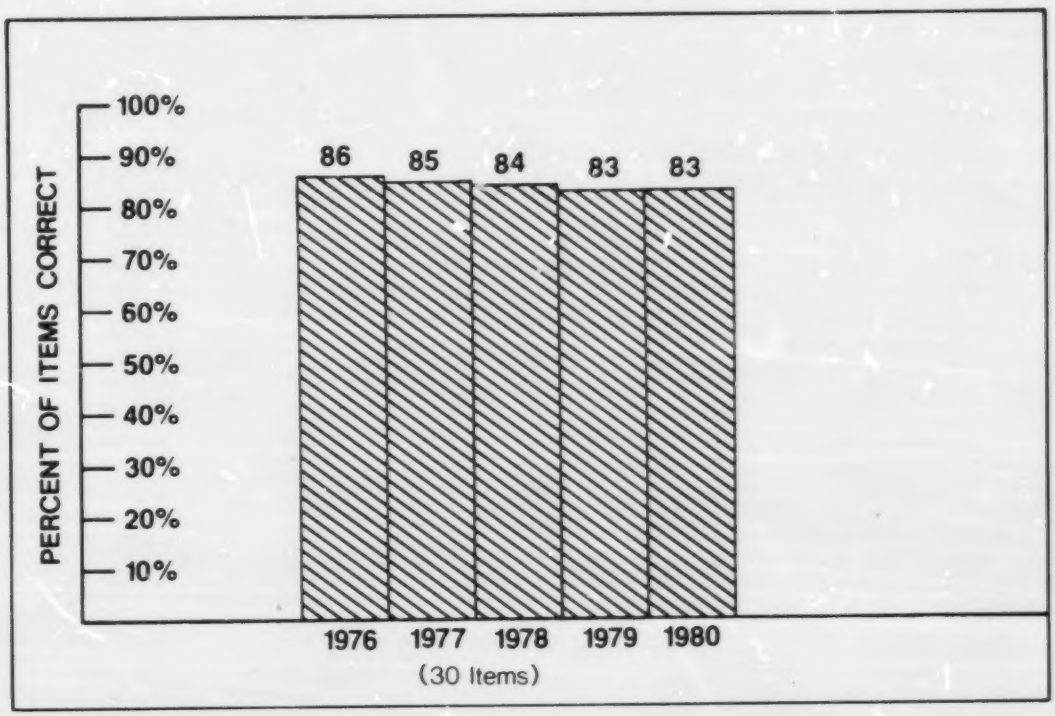
Percent of Items Correct in Mathematics in 1976-1980: Grade 8



Like the fourth and eighth graders, twelfth graders score about the same over the five years. The tests have 30 common items; scores range from 83% correct in 1979 and 1980 to 86% correct in 1976.

Figure 6

Percent of Items Correct in Mathematics 1976-1980: Grade 12



## PART IV: OBJECTIVE-REFERENCED READING TEST RESULTS

The tests in reading administered to fourth, eighth, and twelfth grade students consist of two parts: Educational Reading and Everyday Reading. The items in Educational Reading measure the ability of students to read materials typically presented in school. Questions in Everyday Reading measure the ability of students to read materials which students encounter outside school.

The test objectives at all three grade levels assess both literal and inferential comprehension skills. The fourth grade test has greater emphasis on items measuring the ability to recognize factual information. At grades eight and twelve, the emphasis of the tests is on assessing analytic reading skills, such as recognizing cause and effect relationships, generalizing, and evaluating.

At each grade level, students score slightly higher on the Everyday Reading items than on the Educational Reading items. This may be due to either greater student familiarity with the types of materials presented on the Everyday Reading tests or the more difficult sentence structure and vocabulary in Educational Reading.

READING

Fourth Grade

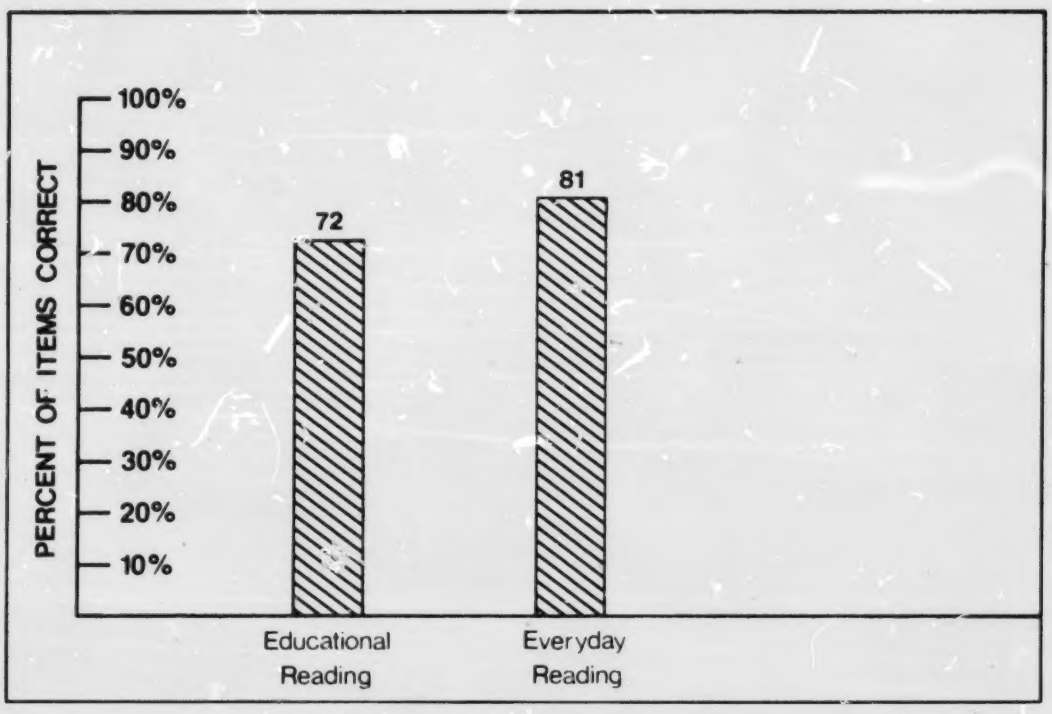
Fourth grade students average 72% correct in Educational Reading and 81% correct in Everyday Reading.

Students score highest on the objective requiring recognition of appropriate information from a telephone directory page. Students score lowest on items which require them to answer questions about a poem.

Fourth grade students have difficulty with the vocabulary associated with health warnings and in understanding maps, charts, and graphs.

Figure 7

Percent of Items Correct in Reading: Grade 4



READING

Eighth Grade

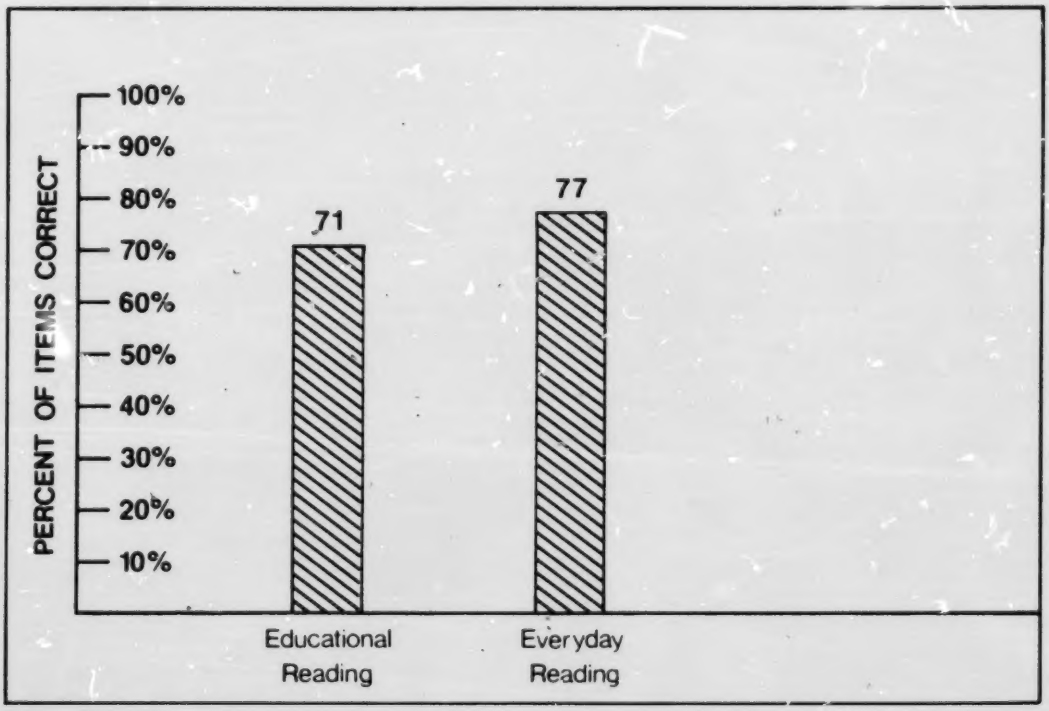
Eighth grade students average 71% correct in Educational Reading and 77% correct in Everyday Reading.

Students score highest on those Everyday Reading objectives requiring recognition of appropriate information from a set of guidelines, a telephone directory, and a health warning. In Educational Reading, eighth graders score highest on objectives asking about the cause of events in a newspaper article and factual information in an expository selection.

Eighth graders score lowest on the questions asking them to reach a conclusion based on information from an expository passage and on items requiring them to recognize appropriate information from a product warranty.

Figure 8

Percent of Items Correct in Reading: Grade 8



READING

Twelfth Grade

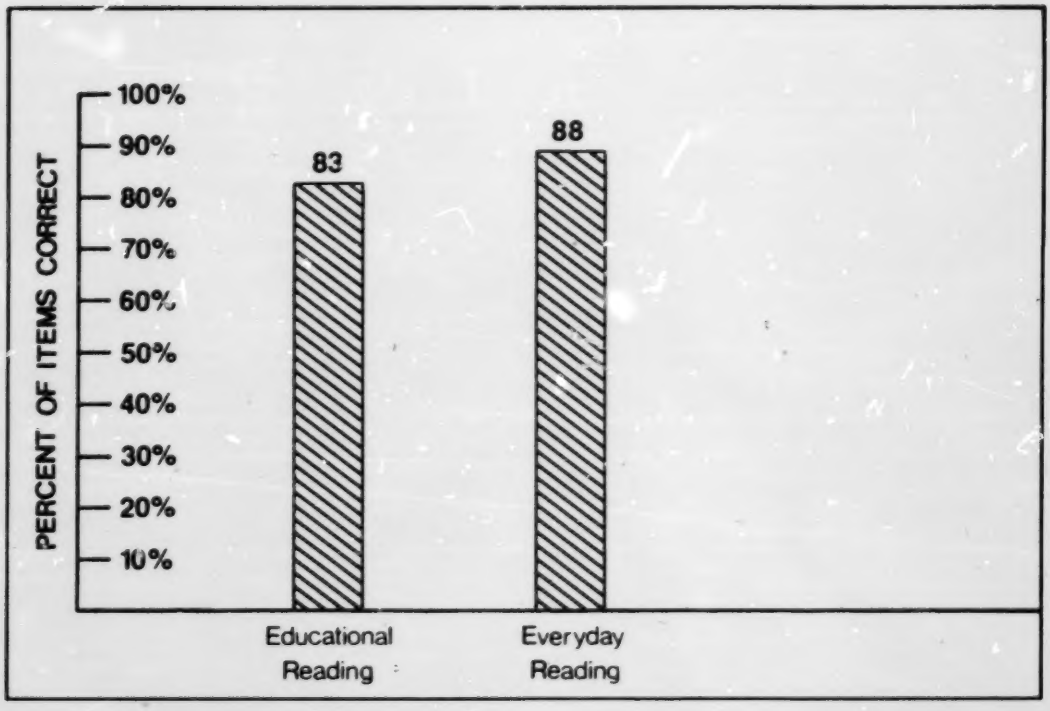
Twelfth graders average 83% correct in Educational Reading and 88% correct in Everyday Reading.

The highest scores for twelfth graders are on the objectives requiring students to recognize appropriate information from operating instructions, want ads or job descriptions, and container label instructions, warnings, or medical antidotes.

The lowest scores in Everyday Reading occur on objectives requiring recognition of appropriate information from a voting ballot and a library catalog card. In Educational Reading, students score lowest on items asking about the main idea of a poem and requiring them to separate fact from opinion in a newspaper or magazine selection.

Figure 9

Percent of Items Correct in Reading: Grade 12



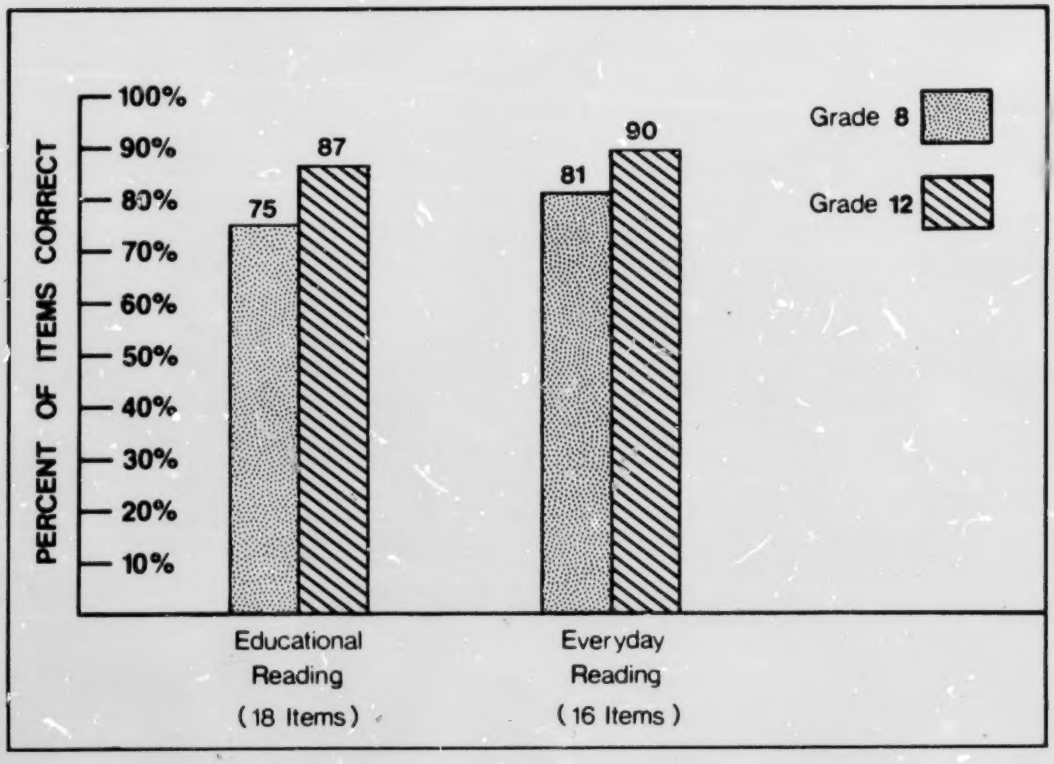
## PART V: COMPARISON OF EIGHTH AND TWELFTH GRADE RESULTS FROM THE OBJECTIVE-REFERENCED READING TESTS

There are 34 identical questions on the eighth and twelfth grade tests in reading. In Educational Reading there are 18 common items; Everyday Reading has 16.

Generally, twelfth graders average about 11 percentage points higher than eighth graders on these identical items. The greatest difference is in Educational Reading, where the twelfth grade students score 12 percentage points higher. In Everyday Reading, the difference is 9 percentage points.

Figure 10

Comparison of Eighth and Twelfth Grade Students on Identical Items From the Reading Tests



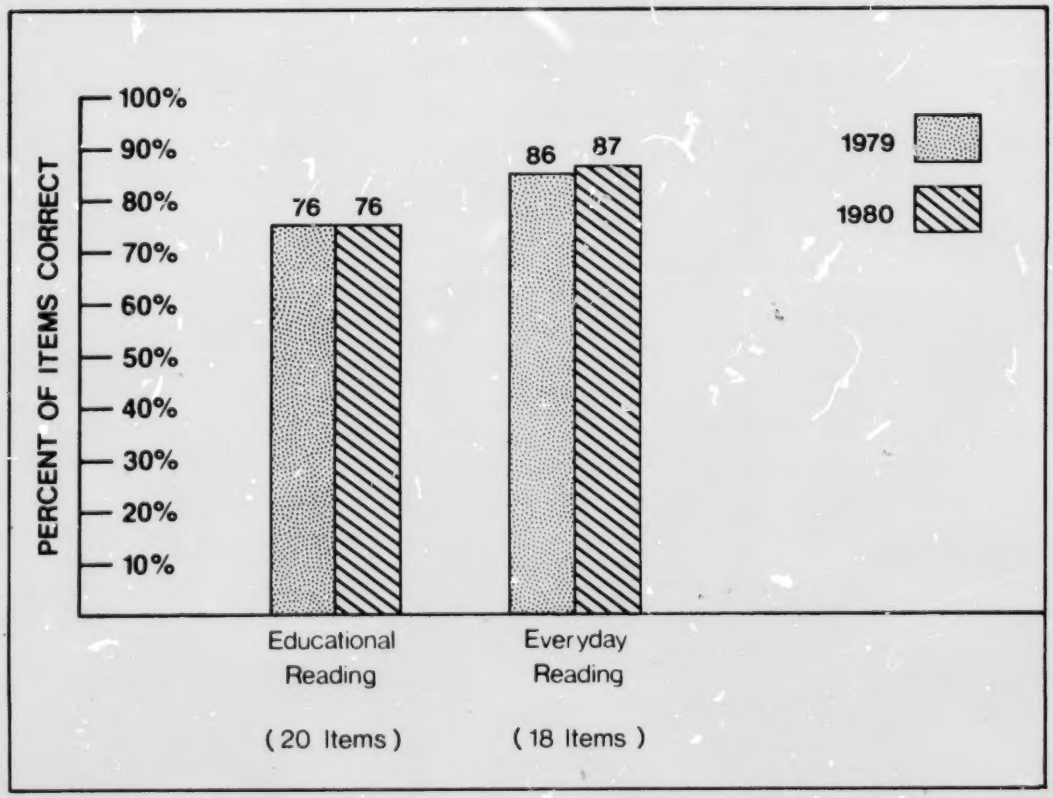
## PART VI: A COMPARISON OF 1979-80 READING RESULTS

A comparison of test results between 1979 and 1980 on identical reading items indicates little variation at any of the grade levels.

At fourth grade there are 20 identical items in Educational Reading and 18 identical items in Everyday Reading. The scores for the two years are nearly the same.

Figure 11

Percent of Items Correct in Reading 1979-1980: Grade 4

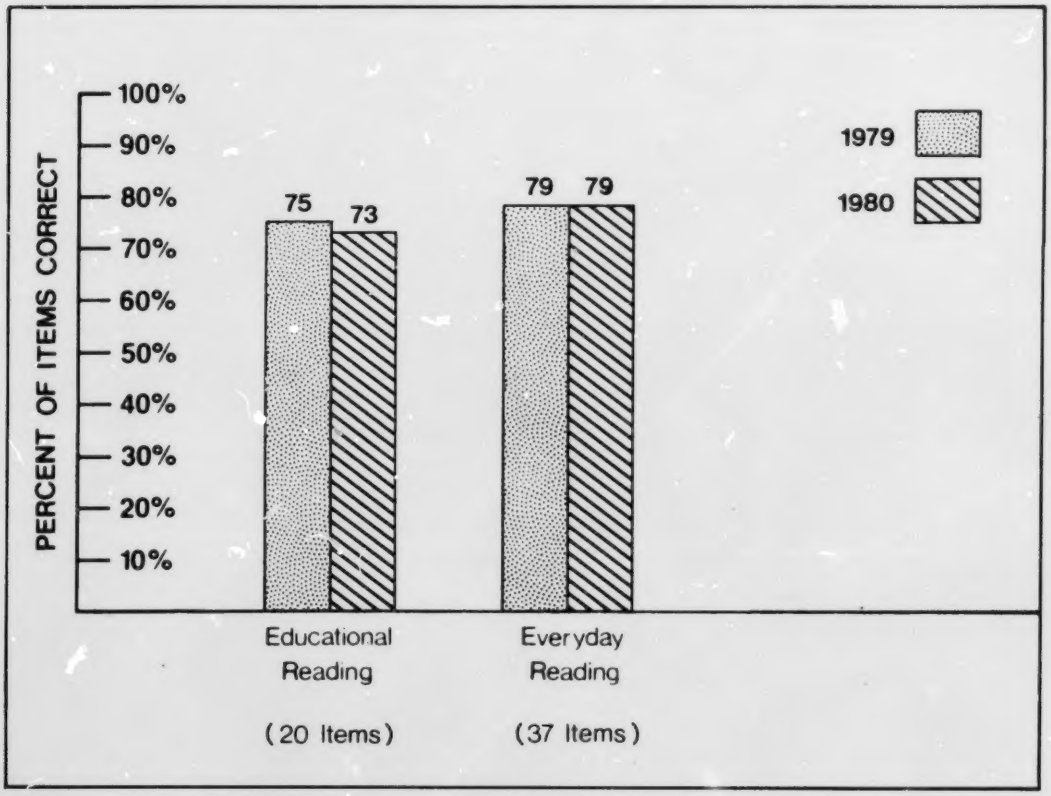


Scores for eighth graders also show little variation. At the eighth grade level, there are 20 identical items in Educational Reading. On these items there is a difference of two percentage points between 1979 and 1980.

In Everyday Reading there are 37 identical items. In each year, students average 79% correct.

Figure 12

Percent of Items Correct in Reading 1979-1980: Grade 8

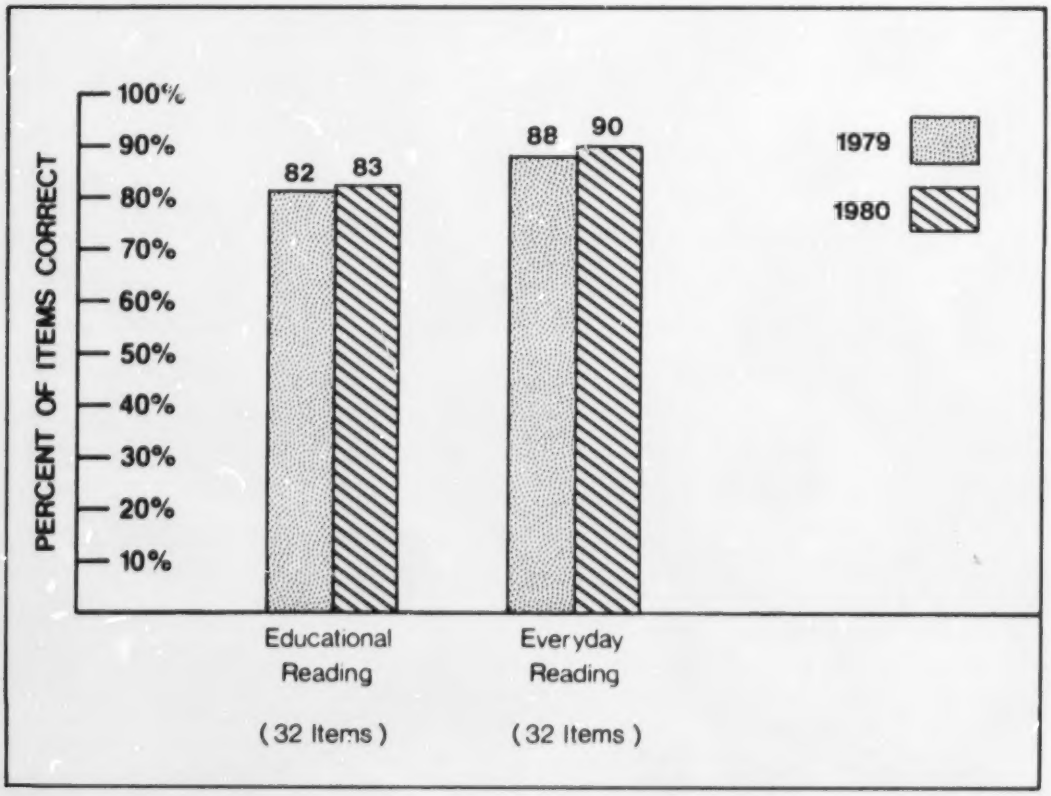


There are 32 identical items on the 1979 and 1980 tests in each twelfth grade reading domain.

As with the fourth and eighth grade students, the scores show relatively little difference between the two years.

Figure 13

Percent of Items Correct in Reading 1979-1980: Grade 12



## PART VII: SAMPLE ITEMS FROM THE OBJECTIVE-REFERENCED TESTS

Sample items from the objective-referenced tests in mathematics and reading are presented on pages 18-35. The sample items are representative of test content and show a range of student performance.

S A M P L E  I T E M S: Fourth Grade Mathematics

Computation Objective 4

Subtract whole numbers with regrouping.

1. 908 - 19 =

| | | |
|---|---|---|
| A | 887 | |
| [B] | 889 | |
| C | 911 | 78% of 4th graders answered this question correctly. |
| D | 984 | |

Computation Objective 7

Multiply whole numbers beyond basic facts, with regrouping.

2. 205 X 5 =

| | | |
|---|---|---|
| A | 125 | |
| B | 210 | |
| C | 225 | 84% of 4th graders answered this question correctly. |
| [D] | 1,025 | |

Computation Objective 8

Divide whole numbers using ÷ symbol with basic facts.

3. 25 ÷ 5 =

| | | |
|---|---|---|
| [A] | 5 | |
| B | 6 | |
| C | 7 | 96% of 4th graders answered this question correctly. |
| D | 8 | |

(Fourth Grade Mathematics)

Computation Objective 10

Divide whole numbers using the division algorithm, without regrouping or remainder.

4. $4\overline{)84}$

| | | |
|---|---|---|
| A | 12 | |
| B | 20 | |
| [C] | 21 | 65% of 4th graders answered this question correctly. |
| D | 41 | |

Applications Objective 14

Solve multi-step problems presented without a picture to find total cost, earnings, or change.

5. Bill wants to buy a kite which costs 59¢ and a ball of string which costs 29¢. He has 75¢. How much <u>more</u> money does he need?

| | | |
|---|---|---|
| [A] | 13¢ more | |
| B | 16¢ more | |
| C | 46¢ more | 65% of 4th graders answered this question correctly. |
| D | 88¢ more | |

(Fourth Grade Mathematics)

Applications Objective 15

Solve simple pictorial problems to find total weight, perimeter, or read graph or ruler.

6. How many pounds do they weigh altogether?

85 lbs.

62 lbs.

47 lbs.

A 204 lbs.

[B] 194 lbs.

C 158 lbs.

D 147 lbs.

93% of 4th graders answered this question correctly.

Applications Objective 17

Solve simple problems presented without pictures to find total time, length, or capacity.

7. It takes three (3) spoons of sugar to sweeten one pitcher of lemonade. How many spoons of sugar are needed to make six (6) pitchers full?

A 3 spoons

B 6 spoons

C 9 spoons

[D] 18 spoons

62% of 4th graders answered this question correctly.

S A M P L E  I T E M S: Eighth/Twelfth Grade Mathematics

Computation Objective 1

Add and subtract whole numbers.

1. 516 + 209 + 48 =

| | | |
|---|---|---|
| A | 763 | |
| B | 753 | |
| C | 873 | 84% of 8th and 87% of 12th graders answered this question correctly. |
| [D] | 773 | |

Computation Objective 3

Divide whole numbers.

2. $27\overline{)8,617}$

| | | |
|---|---|---|
| A | 3 r5 | |
| B | 39 r4 | |
| C | 207 r28 | 85% of 8th and 88% of 12th graders answered this question correctly. |
| [D] | 319 r4 | |

Computation Objective 4

Find percents of whole numbers.

3. 3½% of 100 =

| | | |
|---|---|---|
| A | 0.035 | |
| B | 0.35 | |
| C | 3.12 | 55% of 8th and 59% of 12th graders answered this question correctly. |
| [D] | 3.5 | |

(Eighth/Twelfth Grade Mathematics)

Computation Objective 9

Multiply decimals with regrouping.

4. $\begin{array}{r} 8.7 \\ \times\ 7.2 \\ \hline \end{array}$

A 6,264.

B 626.4

[C] 62.64

D 6.264

87% of 8th and 91% of 12th graders answered this question correctly.

Computation Objective 13

Add and subtract fractions with unlike denominators.

5. $\frac{2}{3} + \frac{4}{5} =$

[A] $1\ \frac{7}{15}$

B $1\ \frac{1}{5}$

C $\frac{14}{15}$

D $\frac{3}{4}$

66% of 8th and 71% of 12th graders answered this question correctly.

Applications Objective 17

Solve problems dealing with earnings and savings.

6. A person who earns $224.00 a week has the following deductions:

$33.42 Income Tax
$ 5.04 Social Security

What is the person's take home pay?

A $ 72.80 per week

B $173.60 per week

[C] $185.54 per week

D $262.46 per week

89% of 8th and 96% of 12th graders answered this question correctly.

Applications Objective 18

Solve problems dealing with basic living and/or traveling expenses.

7. A reasonable 15% tip on a $2.25 meal is:

A 15¢
B 25¢
[C] 35¢
D 45¢

48% of 8th and 73% of 12th graders answered this question correctly.

Applications Objective 19

Solve problems dealing with length or area.

8. A dining room ceiling is 10 feet wide and 12 feet long. How many 1-foot-square tiles are needed to cover it?

A 10 tiles
B 22 tiles
C 44 tiles
[D] 120 tiles

78% of 8th and 91% of 12th graders answered this question correctly.

(Eighth/Twelfth Grade Mathematics)

Applications Objectives 21 and 23

Solve simple and complex problems dealing with rate, time, and/or temperature. Read and interpret tables.

---

The table shows telephone rates from Madison to other Wisconsin cities. Use this table to answer questions 9 and 10.

---

# long distance rates within Wisconsin

| from Madison to: | DIAL-DIRECT | | | | | |
|---|---|---|---|---|---|---|
| | Weekday Full Rate | | Evening 35% Discount | | Night & Weekend 60% Discount | |
| CITY | 1st Min. | Each Add'l Min. | 1st Min. | Each Add'l Min. | 1st Min. | Each Add'l Min. |
| Appleton | $ .39 | $ .26 | $ .25 | $ .17 | $ .15 | $ .11 |
| Beloit | .33 | .20 | .21 | .13 | .13 | .08 |
| Eau Claire | .45 | .32 | .29 | .21 | .18 | .13 |
| Evansville | .24 | .14 | .15 | .10 | .09 | .06 |
| Green Bay | .41 | .28 | .26 | .19 | .16 | .12 |
| Janesville | .30 | .18 | .19 | .12 | .12 | .08 |
| La Crosse | .41 | .28 | .26 | .19 | .16 | .12 |
| Lake Geneva | .35 | .22 | .22 | .15 | .14 | .09 |
| Milwaukee | .37 | .24 | .24 | .16 | .14 | .10 |
| Oshkosh | .37 | .24 | .24 | .16 | .14 | .10 |
| Portage | .27 | .16 | .17 | .11 | .10 | .07 |
| Racine | .37 | .24 | .24 | .16 | .14 | .10 |
| Rhinelander | .46 | .33 | .29 | .22 | .18 | .14 |
| Sheboygan | .39 | .26 | .25 | .17 | .15 | .11 |
| Superior | .50 | .37 | .32 | .25 | .20 | .15 |
| Waukesha | .35 | .22 | .22 | .15 | .14 | .09 |
| Wausau | .43 | .30 | 27 | .20 | .17 | .12 |
| Wisconsin Dells | .33 | .20 | .21 | .13 | .13 | .08 |

Total charges may be less than the sum of the initial minute(s) plus additional minutes charges

9. If the caller takes advantage of the Evening Discount, how much would it cost to call Rhinelander and talk for 5 minutes?

A $ .82

B $1.10

[C] $1.17

D $1.39

53% of 8th and 75% of 12th graders answered this question correctly.

10. How much would it cost to call Portage and talk for one minute on a Saturday night?

A $ .07

[B] $ .10

C $ .17

D $ .27

67% of 8th and 80% of 12th graders answered this question correctly.

S A M P L E  I T E M S: Fourth Grade Reading

Educational Reading Objective 3

Answer questions about characterizations in a narrative selection.

---

Read the story, "The Wolf And The Crane", and answer the question.

---

THE WOLF AND THE CRANE

Once upon a time a wolf got a bone caught in his throat. He was in great pain and cried out to every animal he met to help him. He hinted he would give a reward to the one who helped.

A crane, hoping to get the reward, put her long neck down the wolf's throat and drew out the bone. She then asked for the reward. The wolf grinned and said, "Ungrateful creature! You should be glad you brought your head safely out of a wolf's jaws. That is your reward."

1. Which word best describes the wolf?

A. thankful

[B.] tricky

C. generous

D. lucky

74% of 4th graders answered this question correctly.

(Fourth Grade Reading)

Educational Reading Objective 4

Answer questions about cause and effect in a passage.

---

Read the story, "What You Eat", and answer the question.

---

WHAT YOU EAT

Your eating habits affect how you feel during the day. For example, what happens if you have no breakfast, or a poor breakfast? You are likely to be tired or cross. And you may be hungry by midmorning. What might also happen to the way you do your schoolwork?

Just eating lots of food won't take care of all your body's needs. Every day you need the right kinds of foods in the right amounts. Otherwise, you won't feel or do your best.

Copyright: Julius B. Richmond and Elenore T. Pounds, *You and Your Health.* Glenview, IL: Scott Foresman and Company.

2. According to this story, what might make you tired or cross?

A. not getting enough sleep

B. eating too much breakfast

C. having to go to school every day

[D.] not eating a good breakfast

87% of 4th graders answered this question correctly.

(Fourth Grade Reading)

Educational Reading Objective 5

Identify the main idea in a passage.

---

Read the story below to answer the question.

---

SCARECROWS

Scarecrows are becoming rare today. Fewer farmers use them. Some people think the use of the straw guards is dying out.

Scarecrows were once common in fields and gardens of America. Some scarecrows were dressed in just an old coat. Others wore enough clothes to outfit a passing tramp.

Copyright: Special permission granted by *Weekly Reader News Parade*, published by Xerox Education Publications, Middletown, CT, © Xerox Corp., 1978.

3. What is the main idea of this story?

A. Scarecrows look like tramps.

B. How to make a scarecrow.

C. Most scarecrows are made of straw.

[D.] Scarecrows are becoming rare.

83% of 4th graders answered this question correctly.

(Fourth Grade Reading)

Everyday Reading Objective 8

Recognize appropriate information from a health warning.

---

Use the drawing next to each question in order to answer it.

---

4. Because the contents are flammable, this liquid should <u>not</u> be placed near

   A. ice.
   B. food.
   C. water
   [D.] fire.

90% of 4th graders answered this question correctly.

5. The warning, "Do not incinerate", means you should <u>not</u>

   [A.] burn the can.
   B. drop the can.
   C. shake the can.
   D. cut the can.

54% of 4th graders answered this question correctly.

S A M P L E  I T E M S: Eighth Grade Reading

Educational Reading Objective 3

Answer questions about a poem.

---

Read the following poem, and answer question 1.

---

SNOW IN THE CITY

Snow is out of fashion,
But it still comes down
To whiten all the buildings
In our town;
To dull the noise of traffic;
To dim each glaring light
With star-shaped feathers
Of frosty white.
And not the tallest building
Halfway up the sky;
Or all the trains and busses,
And taxis scudding by;
And not a million people,
Not one of them at all,
Can do a thing about the snow
But let it fall!

Copyright: Rachel Field, from *Branches Green.* New York: Macmillan Publishing Co., Inc. 1934. Renewed by Arthur S. Pederson, 1962.

1. According to the poem, what can the people of the city do about the snow?

A. not drive their cars

B. stay indoors until it is plowed

[C.] nothing at all

D. enjoy the snow while it lasts

84% of 8th graders answered this question correctly.

(Eighth Grade Reading)

Educational Reading Objective 6

Infer a conclusion from an expository selection.

---

Read "American Citizenship", and answer questions 2 and 3.

---

AMERICAN CITIZENSHIP

American citizenship gives a person many rights. Some of those rights are protection from arbitrary arrest and the right to criticize the government and its leaders. In return, citizenship places responsibilities on people: obedience to laws, a willingness to vote, to serve on juries, to pay taxes, to defend your country against its enemies.

Each right we have carries with it certain responsibilities. For example, the right to vote carries with it the responsibility of being informed.

2. Which of the following does citizenship guarantee?

   A. willingness to vote

   B. obedience to laws

   [C.] protection from arbitrary arrest

   D. selection to serve on juries

61% of 8th graders answered this question correctly.

3. Why does the author of the article state that the right to vote carries with it the responsibility of being informed?

   [A.] because one cannot vote intelligently without being informed

   B. because voting is guaranteed by the Constitution

   C. because voting is one way to criticize the government

   D. because voting may affect the amount of taxes one pays

62% of 8th graders answered this question correctly.

(Eighth Grade Reading)

Everyday Reading Objective 14

Recognize appropriate information from a telephone directory page.

---

Use this telephone directory page to answer questions 4 and 5.

---

266 ..... CALUMET
384 ..... CASSVILLE
270 ..... CATAWBA
383 ..... NORWAY
381 ..... MANITOBA
386 ..... WILCOX

Hansen Jerry 1131 Dremer Ave ..... 384-5246
Hansen Joseph RFD 1 ..... 383-7974
Hansen Lambert A 311 Jefferson ..... 270-3921
Hansen Richard S RFD 2 ..... 384-7872
Hansen Stanley RFD 3 ..... 270-4240
Hanshaw Orville 605 Main ..... 384-7983
Hanson Arthur RFD 1 ..... 266-2828
Hanson Bruce 418 Pearl ..... 266-2256
Hanson Dale D 41 S. Garden ..... 381-4351
Hanson David M RFD 1 ..... 266-4477
Hanson Gareld RFD 1 ..... 381-4394
Hanson Gerald 515 Austin ..... 266-4114
Hanson Gilman A Rev ..... 266-2937
Hanson Gordon RFD 4 ..... 266-4481
Hanson John RFD 4 ..... 381-4112
Hanson LaVern RFD 6 ..... 266-4069
Hanson Leona A RFD 1 ..... 384-5901
Hanson Norman R RFD 2 ..... 266-8127
Hanson Richard O RFD 1 ..... 266-9449
Hanson Steven L RFD 4 ..... 266-2299
Hanson Thomas RFD 3 ..... 266-4721
**HANSON'S AUTO SALVAGE**
401 Milton ..... 266-9734
**HANSON'S CLOTHING LTD**
113-118 S Wayland ..... 266-8711
Hanssen Robert J 1207 Lane Rd ..... 266-6212
Hardie Alice 200 E Mifflin ..... 266-7422
Hardie Greg RFD 6 ..... 266-4177
**HARDIE ROGER** Bldg. Contr.
215 Center St ..... 270-8082

4. What is the telephone number of the Gerald Hanson who lives on Austin Street?

   [A.] 266-4114
   B. 281-4394
   C. 266-2256
   D. 266-2937

   97% of 8th graders answered this question correctly.

5. What area does John Hanson at 381-4112 live in?

   A. Wilcox
   B. Calumet
   [C.] Manitoba
   D. Norway

   91% of 8th graders answered this question correctly.

S A M P L E  I T E M S: Twelfth Grade Reading

Educational Objective 2

Answer questions about factual information in an expository selection.

---

Read the selection on government, and answer questions 1 and 2.

---

GOVERNMENT

Almost all the states (except Alaska, Connecticut, and Rhode Island) are divided into counties (parishes in Louisiana) to perform such governmental jobs as building local roads, fighting fires, policing, and distributing welfare allowances to the needy. Within the counties are divisions called towns, townships, villages, and cities. These are areas with some concentration of population which find it convenient to carry out some or all of the local governmental work themselves. Their job is basically the same as the county's, although they often leave some functions for the county to perform for them.

The cities, too, are creatures of the state, operating at least theoretically as agents of state government. But in many states the larger cities have been given a considerable degree of *home rule* - legal freedom to deal as best they can with their often serious local problems. Such cities usually have been allowed to adopt *charters* - similar to constitutions - approved by the state legislature, which outline their form of government and their powers.

Copyright: Miriam Roher Resnick and Lillian Herlich Merenberg, American Government in Action, Columbus, OH: Charles E. Merrill Publishing Company, A Bell and Howell Company, 1969.

1. States are divided into counties in order to

   A. divide the population into areas.
   B. decide what are towns, townships, villages, and cities.
   C. distribute welfare easily.
   [D.] perform governmental services

   85% of 12th graders answered the question correctly.

2. Charters are developed to

   A. provide for divisions in the states.
   B. support parishes.
   [C.] define local control.
   D. establish counties.

   84% of 12th graders answered this question correctly.

(Twelfth Grade Reading)

Educational Reading Objective 11

Identify bias in a newspaper or magazine selection.

---

Read the following article, and answer questions 3 and 4.

---

Louis Myers, seven-year-old son of Herbert and Rose Myers, 1923 West Kane Avenue in Melrose, was struck by a speeding automobile yesterday in front of his home. According to witnesses, the Myers child was crossing the street to play with friends at about 8:00 p.m. when an approaching 1972 blue and white Chevrolet, driven by 18-year-old Charles Sprawl, 123 East Main Street in Melrose, turned onto West Kane from Highfield Boulevard at a high rate of speed. Sprawl, who has a long record of driving citations, hit the Myers boy with the left side of his automobile, violently throwing the innocent boy into a nearby parked car.

Myers was taken to Memorial Hospital by police ambulance, where he was reported early this morning to be in stable condition, with numerous internal injuries and facial lacerations.

Sprawl, after striking the child, got into a heated argument with several residents of West Kane Avenue. Only the prompt arrival of Melrose police prevented a more serious incident. Sprawl was not ticketed by Melrose police.

3. Which of the underlined statements in the story reflects the writer's PERSONAL VIEWPOINT?

A. "numerous internal injuries and facial lacerations"
B. "the Myers child was crossing the street"
[C.] "violently throwing the innocent boy"
D. "Myers was taken to Memorial Hospital by police ambulance"

89% of 12th graders answered this question correctly.

4. What is the author's opinion of Charles Sprawl?

A. has a positive opinion
[B.] has a negative opinion
C. has mixed feelings
D. has no opinion

79% of 12th graders answered this question correctly.

(Twelfth Grade Reading)

Everyday Reading Objective 18

Recognize appropriate information from a computerized bill.

---

Use the following computer bill to answer questions 5 and 6.

---

**LPOL**
LANDERS POWER & LIGHT
P.O. BOX 1345
EVANSTON, NC 70755

FOR SERVICE from 06 15 to 07 17

ACCOUNT NUMBER 15 0988 773 44 21

BILLING INFORMATION 252-7222

GENERAL SALES OFFICE 252-7000
FOR EMERGENCIES: 271-5132 OR 271-5133

| READINGS Present | Previous | USE | RATE | FA/PGA | B/C | AMOUNT |
|---|---|---|---|---|---|---|
| 434 | 408 | 26 | G | 5710 | 1 | 9 28 |
| 9005 | 8854 | 151 | E | 348 | 1 | 8 87 |
| | | sales tax | | | | 72 |

Helen Iverson
3319 Sawyer Road
Evanston, NC 70755

AMOUNT DUE 18 87

DATE DUE 08 04 78

KEY: Electricity in kilowatt hours
Gas in 100's of cubic feet

GAS AND ELECTRIC BILL

5. The billing period is for about

A. one week.
B. two weeks.
[C.] one month.
D. two months.

90% of 12th graders answered this question correctly.

6. How much electricity was used during the billing period?

[A.] 151 kwh
B. 348 kwh
C. 8854 kwh
D. 9004 kwh

80% of 12th graders answered this question correctly.

## PART VIII: TEST OBJECTIVES AND SCORES

Test objectives for each of the objective-referenced tests are listed on pages 37 to 41. Summarized in the chart below are the tests, domains, number of objectives, number of items, and the 1980 statewide results.

| TEST<br>Test Domains | Number of Objectives | Number of Items | 1980 Statewide Results* |
|---|---|---|---|
| MATHEMATICS: Fourth Grade | | | |
| Computation/Applications | 18 | 73 | 79% |
| MATHEMATICS: Eighth Grade | | | |
| Computation/Applications | 23 | 90 | 71% |
| MATHEMATICS: Twelfth Grade | | | |
| Computation/Applications | 23 | 90 | 80% |
| READING: Fourth Grade | | | |
| Educational Reading | 5 | 36 | 72% |
| Everyday Reading | 9 | 36 | 81% |
| READING: Eighth Grade | | | |
| Educational Reading | 9 | 37 | 71% |
| Everyday Reading | 12 | 48 | 77% |
| READING: Twelfth Grade | | | |
| Educational Reading | 11 | 54 | 83% |
| Everyday Reading | 9 | 36 | 88% |

*Percentage of items that Wisconsin students answered correctly on each test in 1980.

1980 TEST OBJECTIVES IN MATHEMATICS

## Fourth Grade Mathematics Test: Computation and Applications

### Computation

| | | |
|---|---|---|
| 1. | Add whole numbers without regrouping. | 86% |
| 2. | Add whole numbers with regrouping. | 89% |
| 3. | Subtract whole numbers without regrouping. | 87% |
| 4. | Subtract whole numbers with regrouping. | 77% |
| 5. | Multiply whole numbers with basic facts. | 93% |
| 6. | Multiply whole numbers beyond basic facts, no regrouping. | 83% |
| 7. | Multiply whole numbers beyond basic facts, with regrouping. | 81% |
| 8. | Divide whole numbers using ÷ symbol with basic facts. | 87% |
| 9. | Divide whole numbers using $)\overline{\quad}$ symbol with basic facts. | 86% |
| 10. | Divide whole numbers using the division algorithm, without regrouping or remainder. | 71% |

### Money Applications

| | | |
|---|---|---|
| 11. | Solve simple, pictorial problems to find total costs and total coins. | 85% |
| 12. | Solve multi-step pictorial problems to find total cost, tax, change, or earnings. | 68% |
| 13. | Solve simple problems presented without a picture to find total cost and change from a purchase. | 83% |
| 14. | Solve multi-step problems presented without a picture to find total cost, earnings, or change. | 53% |

### Measurement Applications

| | | |
|---|---|---|
| 15. | Solve simple pictorial problems to find total weight, perimeter, or read a graph or ruler. | 91% |
| 16. | Solve multi-step pictorial problems to find total miles, area, and differences in temperature. | 74% |
| 17. | Solve simple problems presented without pictures to find total time, length, or capacity. | 72% |
| 18. | Solve multi-step problems presented without pictures to find total time, units, or weight. | 55% |

Eighth and Twelfth Grade Mathematics Test: Computation and Applications

| Computation | 8th Grade | 12th Grade |
|---|---|---|
| 1. Add and subtract whole numbers. | 85% | 90% |
| 2. Multiply whole numbers. | 84% | 87% |
| 3. Divide whole numbers. | 83% | 86% |
| 4. Find percents of whole numbers. | 53% | 68% |
| 5. Find the percent one whole number is of another. | 63% | 75% |
| 6. Find percent-fraction-decimal equivalents. | 67% | 75% |
| 7. Add terminating decimals. | 82% | 87% |
| 8. Subtract terminating decimals with regrouping. | 76% | 81% |
| 9. Multiply decimals with regrouping. | 78% | 86% |
| 10. Divide decimals with terminating quotients. | 74% | 77% |
| 11. Use ratio and proportion to solve equivalent fractions. | 74% | 82% |
| 12. Add and subtract fractions with like denominators. | 73% | 83% |
| 13. Add and subtract fractions with unlike denominators. | 69% | 74% |
| 14. Multiply fractions using a horizontal form. | 71% | 75% |
| 15. Divide using fractions. | 66% | 72% |
| **Money Applications** | | |
| 16. Solve problems related to purchases (cost, possible purchase, change, discount, tax, or surcharge). | 77% | 86% |
| 17. Solve problems dealing with earnings and savings. | 78% | 90% |
| 18. Solve problems dealing with basic living and/or traveling expenses. | 67% | 82% |
| **Measurement Applications** | | |
| 19. Solve problems dealing with length or area. | 58% | 74% |
| 20. Solve problems dealing with weight and/or volume. | 60% | 77% |
| 21. Solve simple and complex problems dealing with rate, time, and/or temperature. | 50% | 66% |
| 22. Read graphs and maps. | 83% | 90% |
| 23. Read and interpret tables. | 73% | 85% |

## 1980 TEST OBJECTIVES IN READING

### Fourth Grade Reading Test: Educational Reading

From examples of materials typically read by fourth graders, the student will be able to . . .

| | | |
|---|---|---|
| 1. | answer questions about factual information in an expository selection. | 76% |
| 2. | answer questions about a poem. | 62% |
| 3. | answer questions about characterizations in a narrative selection. | 71% |
| 4. | answer questions about cause and effect in a passage. | 81% |
| 5. | identify the main idea in a passage. | 66% |

### Fourth Grade Reading Test: Everyday Reading

| | | |
|---|---|---|
| 6. | recognize appropriate information from a set of rules. | 88% |
| 7. | recognize appropriate information from a set of directions. | 82% |
| 8. | recognize appropriate information from a health warning. | 75% |
| 9. | recognize appropriate information from a telephone directory page. | 90% |
| 10. | recognize appropriate information from a dictionary page. | 81% |
| 11. | recognize appropriate information from a table of contents or index from a textbook. | 74% |
| 12. | recognize appropriate information from common street and highway signs. | 83% |
| 13. | recognize appropriate information from a highway map. | 80% |
| 14. | recognize appropriate information from a graph or chart. | 73% |

### Eighth Grade Reading Test: Educational Reading

From examples of materials typically read by eighth graders, the student will be able to . . .

| | | |
|---|---|---|
| 1. | answer questions about factual information in an expository selection. | 80% |
| 2. | answer questions about the cause of events or actions in a newspaper or magazine selection. | 87% |
| 3. | answer questions about a poem. | 77% |
| 4. | identify the main idea in a newspaper or magazine selection. | 65% |
| 5. | identify the main idea in an expository selection. | 66% |
| 6. | infer a conclusion from an expository selection. | 63% |
| 7. | identify a writer's point of view in a newspaper editorial or magazine selection. | 72% |

Eighth Grade Reading Test: Everyday Reading

| | | |
|---|---|---|
| 8. | separate fact from opinion in a newspaper or magazine selection. | 65% |
| 9. | identify the cause and effect of an event described in a newspaper or magazine selection. | 64% |
| 10. | recognize appropriate information from a set of guidelines. | 94% |
| 11. | recognize appropriate information from medical instructions. | 82% |
| 12. | recognize appropriate information from a health warning. | 89% |
| 13. | recognize appropriate information from a container label with instructions, warnings, or comparative buying information. | 80% |
| 14. | recognize appropriate information from a telephone directory page. | 91% |
| 15. | recognize appropriate information from a dictionary page. | 78% |
| 16. | recognize appropriate information from a product warranty. | 55% |
| 17. | recognize appropriate information from a recipe. | 75% |
| 18. | recognize appropriate information from a business letter. | 79% |
| 19. | recognize appropriate information from a graph or chart. | 61% |
| 20. | recognize appropriate information from want ads or job descriptions. | 77% |
| 21. | separate fact from opinion in an advertisement. | 63% |

Twelfth Grade Reading Test: Educational Reading

From examples of materials typically read by twelfth graders, the student will be able to . . .

| | | |
|---|---|---|
| 1. | answer questions about factual information in a narrative selection. | 80% |
| 2. | answer questions about factual information in an expository selection. | 85% |
| 3. | answer questions about a poem. | 82% |
| 4. | answer questions about the cause of events or actions in a passage. | 85% |
| 5. | identify the main idea in a newspaper or magazine selection. | 83% |
| 6. | identify the main idea in a poem. | 84% |
| 7. | identify a generalization statement by making an inference from a passage. | 83% |
| 8. | answer questions about implied facts in a newspaper or magazine selection. | 83% |
| 9. | make an inference from a narrative selection. | 83% |
| 10. | separate fact from opinion when reading a newspaper or magazine article such as an editorial. | 81% |
| 11. | identify bias in a newspaper or magazine selection. | 87% |

Twelfth Grade Reading Tests: Everyday Reading

| | | |
|---|---|---|
| 12. | recognize appropriate information from operating instructions for an appliance. | 92% |
| 13. | recognize appropriate information from a business letter. | 94% |
| 14. | recognize appropriate information from a container label with instructions, warnings, or medical antidotes. | 96% |
| 15. | recognize appropriate information from a library catalog card. | 78% |
| 16. | recognize appropriate information from a dictionary page. | 86% |
| 17. | recognize appropriate information from a voting ballot. | 80% |
| 18. | recognize appropriate information from a computerized bill. | 88% |
| 19. | recognize appropriate information from want ads or job descriptions. | 92% |
| 20. | recognize appropriate comparative buying information from warranties, ratings, advertising, or container labels. | 89% |

## PART IX: COMPREHENSIVE TESTS OF BASIC SKILLS RESULTS

During the past five years, the Comprehensive Tests of Basic Skills (CTBS)* has been administered to Wisconsin fourth, eighth, and twelfth grade students to determine how they compare with a national norm group. Students are tested in three subject areas: reading, language, and mathematics.

The national percentile scores of the CTBS serve as the basis for comparison. National percentile scores indicate how well the average Wisconsin student performs in relation to students of a similar grade across the country. Percentile scores range from 1 to 99. A percentile score of 60 means that 60% of the national norm group scored lower on this test than the average Wisconsin student. It does not mean that the student answered 60% of the questions correctly.

Another method is also used to compare Wisconsin fourth, eighth, and twelfth grade students with national averages. Percentile scores are classified into three ranges: upper, middle, and lower. Nationally, 25% of all students score in the upper and lower ranges; 50% score in the middle range. The percentage of Wisconsin students falling in the various percentile ranges is shown on the following graphs for each grade level. This method of comparing Wisconsin students to the national norm group shows the distribution pattern of Wisconsin students performance at all three grade levels.

*Published by CTB/McGraw-Hill

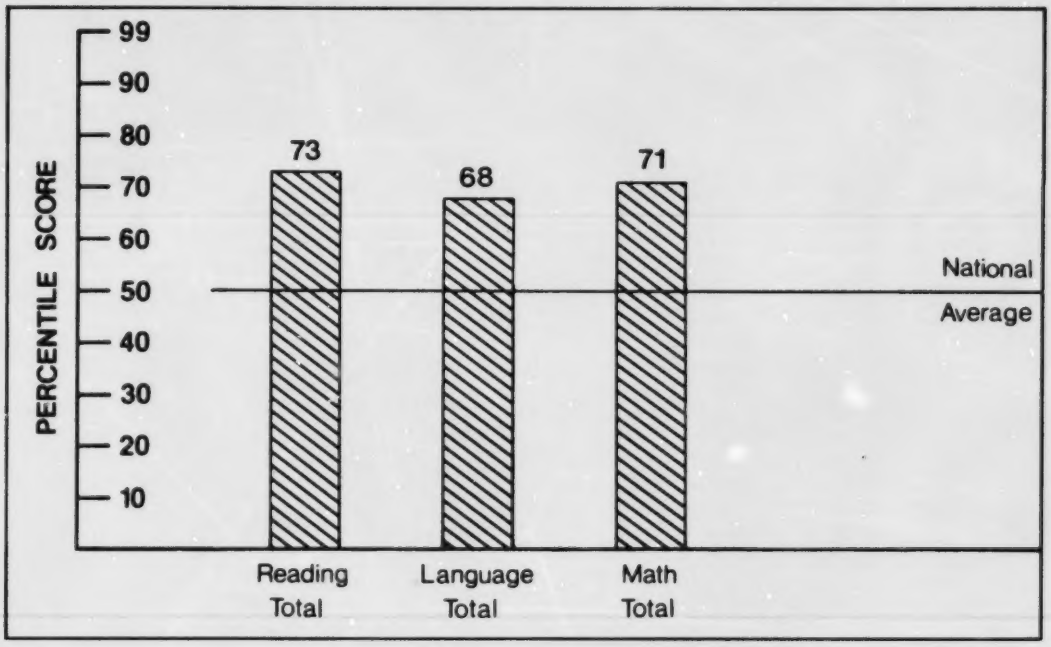
1980 CTBS Results

Fourth Grade

The average fourth grader in Wisconsin scores at the 73rd percentile in reading, the 68th percentile in language, and the 71st percentile in mathematics. These scores average approximately 21 percentile points above the national average.

Figure 14

Median Percentile Scores of Wisconsin Fourth Grade Students Compared to the National Average




The distribution of Wisconsin fourth graders within three percentile ranges indicates a positive performance by students. For example, in reading, 46% of Wisconsin fourth graders place in the upper range. This is 21% more than occurs nationally. Only 9% fall into the lower range; this is 16% less than occurs nationally.

Comparison of Wisconsin Fourth Grade Students With National Norms: Reading, Language, and Mathematics

| Percentile Range | | National % of Students | Percent of Wisconsin Students Falling in Percentile Range | | |
|---|---|---|---|---|---|
| | | | Reading | Language | Mathematics |
| Upper | (76-99) | 25 | 46 | 39 | 40 |
| Middle | (26-75) | 50 | 45 | 51 | 47 |
| Lower | ( 1-25) | 25 | 9 | 10 | 13 |
| Totals | | 100% | 100% | 100% | 100% |

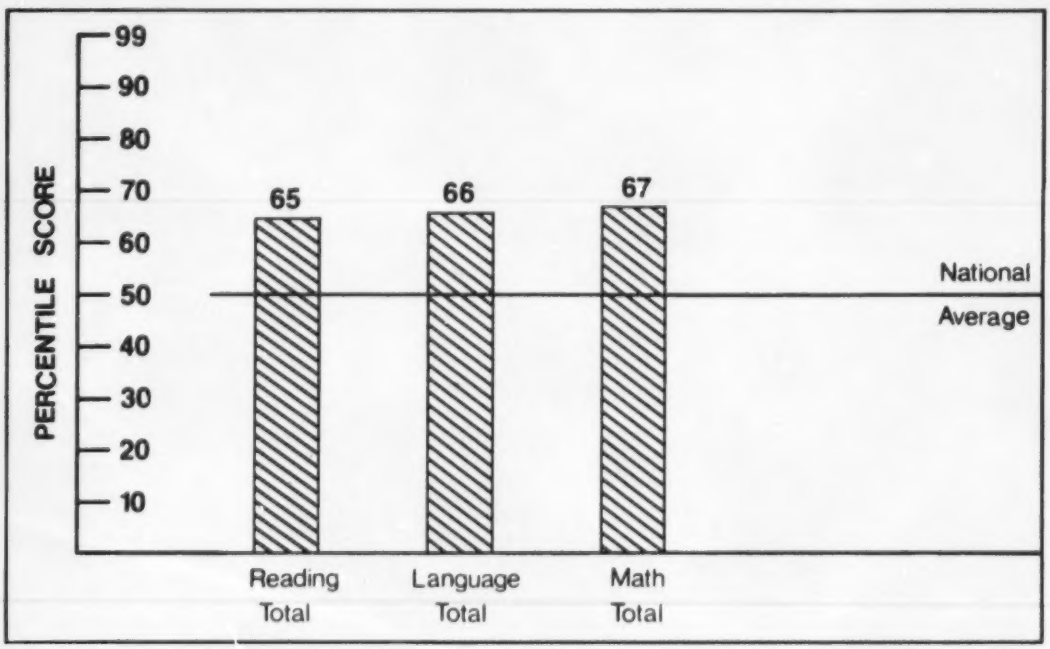
1980 CTBS Results

Eighth Grade

The average Wisconsin eighth grader scores at the 65th percentile in reading, the 66th percentile in language, and the 67th percentile in mathematics. These scores average 16 percentile points above the national average.

Figure 15

Median Percentile Scores of Wisconsin Eighth Grade Students Compared to the National Average




Wisconsin eighth graders tend to fall into the middle and upper percentile ranges. For example, on the mathematics subtest, only 6% fall in the lower percentile range. This is 19% less than occurs nationally. In contrast, 42% fall in the upper range. This is 17% more than occurs nationally.

Comparison of Wisconsin Eighth Grade Students With National Norms: Reading, Language, and Mathematics

| Percentile Range | | National % of Students | Percent of Wisconsin Students Falling in Percentile Range | | |
|---|---|---|---|---|---|
| | | | Reading | Language | Mathematics |
| Upper | (76-99) | 25 | 37 | 37 | 42 |
| Middle | (26-75) | 50 | 54 | 55 | 52 |
| Lower | ( 1-25) | 25 | 9 | 8 | 6 |
| Totals | | 100% | 100% | 100% | 100% |

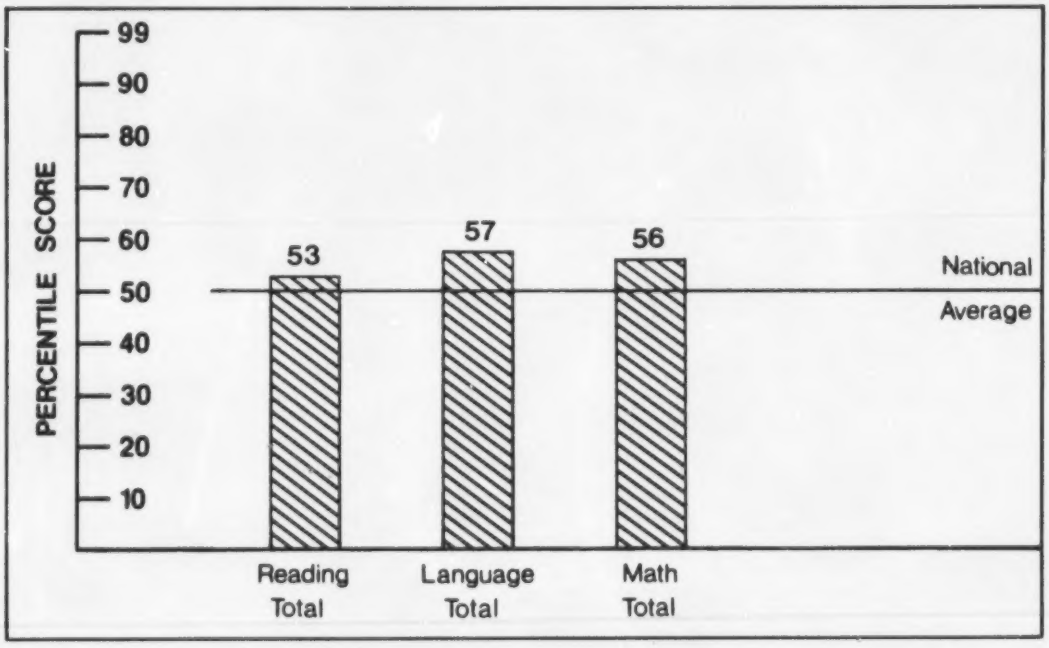
## 1980 CTBS Results

### Twelfth Grade

The average Wisconsin twelfth grader scores at the 53rd percentile in reading, the 57th percentile in language, and the 56th percentile in mathematics. These scores average about five percentile points above the national average.

Figure 16

Median Percentile Scores of Wisconsin Twelfth Grade Students Compared to the National Average




The distribution of scores of Wisconsin twelfth graders shows they tend to place in the middle and upper percentile ranges. For example, on the subtest in reading, 83% of the twelfth grade students place in the upper two ranges. This is 8% more than occurs nationally.

Comparison of Wisconsin Twelfth Grade Students With National Norms: Reading, Language, and Mathematics

| Percentile Range | | National % of Students | Percent of Wisconsin Students Falling in Percentile Range | | |
|---|---|---|---|---|---|
| | | | Reading | Language | Mathematics |
| Upper | (76-99) | 25 | 24 | 25 | 30 |
| Middle | (26-75) | 50 | 59 | 58 | 56 |
| Lower | ( 1-25) | 25 | 17 | 17 | 14 |
| Totals | | 100% | 100% | 100% | 100% |

Comparison of 1976-1980 CTBS Results

Figures 17, 18, and 19 show the results at grades 4, 8, and 12 on the Comprehensive Tests of Basic Skills during the past five years.

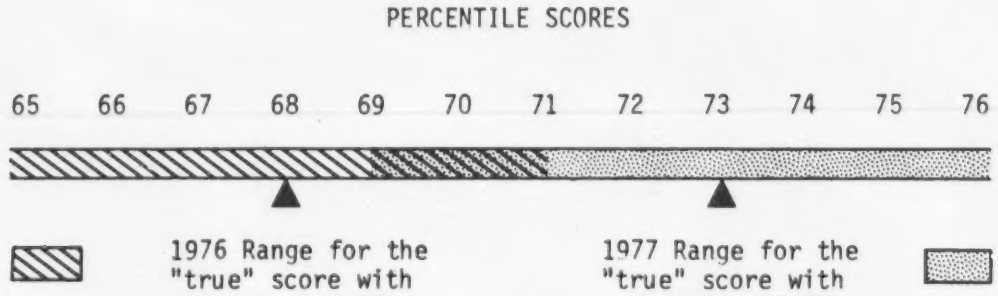
While there is variation on each of the grade level subtests over the five years, no clear-cut pattern is apparent.

It is important to recognize that any score derived through sampling is an estimate of the "true" score. In practical terms, this means that if all students at a grade level were tested on the CTBS, it is likely that the percentile scores would be slightly different from those gathered through sampling.

In general, the reported percentile scores on the CTBS can be shown to fall within 2 or 3 points of the "true" median.

As an example, the median scores of fourth graders on the mathematics test are at the 68th percentile in 1976 and the 73rd percentile in 1977. Based on a range of 3 points either side of these scores, the "true" percentile score for 1976 falls between the 65th and 71st percentiles. For 1977, the range is between the 70th and 76th percentiles.

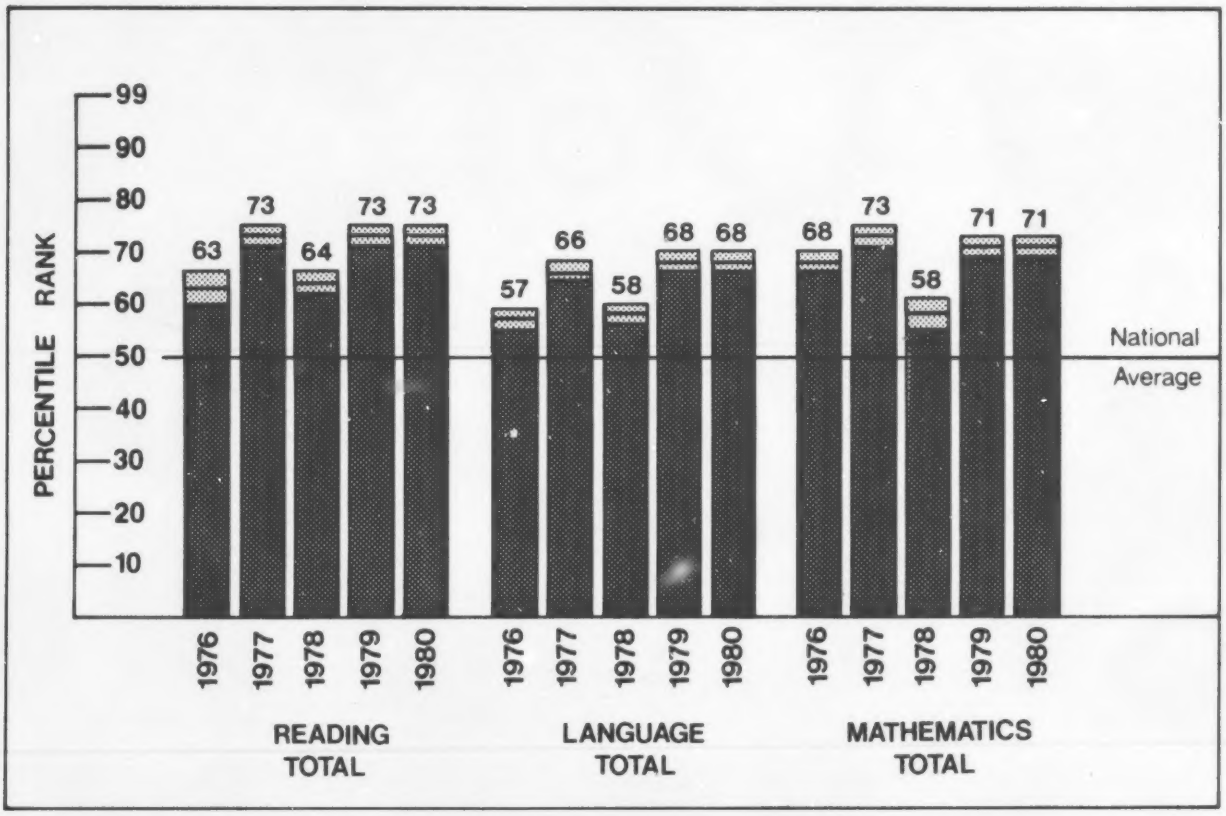
In effect, it is possible that the "true" percentile scores in the above example for 1976 and 1977 are identical. That is, the true percentile score may fall in the overlapping area, as indicated below.


PERCENTILE SCORES
65 66 67 68 69 70 71 72 73 74 75 76
1976 Range for the "true" score with a median of 68
1977 Range for the "true" score with a median of 73

When comparing scores derived through sampling, it is important to calculate the possible range for the score. In general, at least five percentile points between CTBS scores is necessary before concluding that there is a difference in the "true" scores and not a random fluctuation.

Figure 17

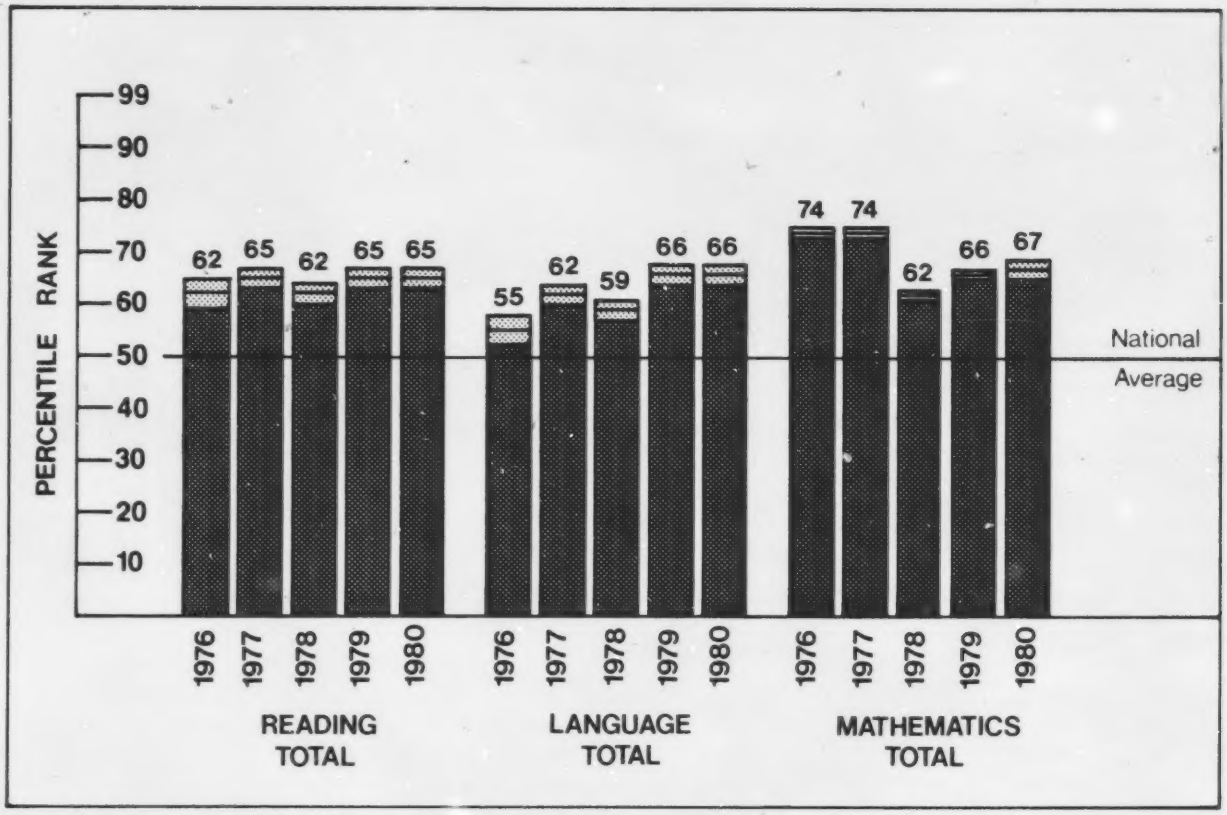
Comparison of the Wisconsin Fourth Grade Scores
to the National Average
on the Comprehensive Tests of Basic Skills
1976-1980




Scores of fourth graders over the five-year period average approximately 17 percentile points above the national average. The shaded area on each bar represents the possible range for the percentile score.

Figure 18

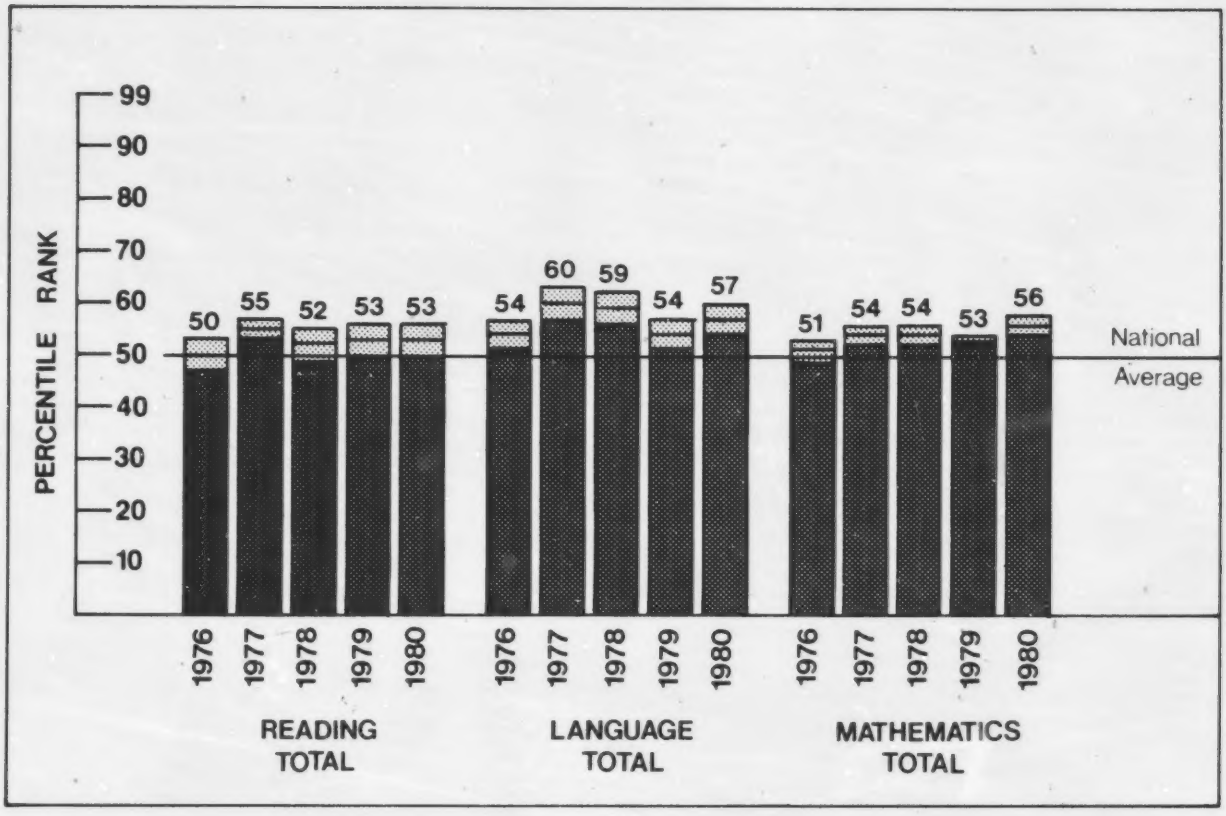
Comparison of Wisconsin Eighth Grade Scores
to the National Average
on the Comprehensive Tests of Basic Skills
1976-1980




Eighth grade students average 15 percentile points above the national average during the period, 1976-1980. The shaded area on each bar represents the possible range for the percentile score.

Figure 19

Comparison of Wisconsin Twelfth Grade Scores
to the National Average
on the Comprehensive Tests of Basic Skills
1976-1980




Twelfth graders average approximately 4 percentile points above the national average from 1976 to 1980. The shaded area on each bar represents the possible range for the percentile score.



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